

LYSTROPHIS COPE, 1885 (REPTILIA); PROPOSED VALIDATION
UNDER THE PLENARY POWERS. Z.N.(S.) 1484

By Joseph R. Bailey (*Department of Zoology, Duke University, Durham, North Carolina, U.S.A.*)

The purpose of this application is to lay before the International Commission on Zoological Nomenclature the facts relevant to the status of certain generic and specific names applied to South American snakes with protuberant snouts, and to request the Commission to allocate certain of these names to the appropriate Official Lists in the interests of stability. Although several names for several different groups are involved these are so tangled in the literature that it is convenient to treat them jointly rather than individually.

2. *Rhinostoma* was first proposed by Fitzinger (1826 : 56) to include two new species, *rufo-fusca* from Santo Domingo and *proboscidea* from Brazil, neither of which, to the best of my knowledge, was ever described adequately. The genus was vaguely described in successive couplets of a dichotomous analysis on page 29, in a manner technically sufficient to validate the name but insufficient for purposes of satisfactory identification.

3. On page 31 we find, "aus zwei neuen Arten aus St. Domingo und Brasilien, schuf ich die Gattung *Rhinostoma*", and again on page 56 is found,

"16. Genus *Rhinostoma*. *Rhinostoma*

(1) *R. rufo-fusca*. M. Rothbraune R. Ex America, Insula St. Dominici

(2) *R. proboscidea*. Mus. Vind. Langrüsselige R. Ex America, Brasilia"

The terms "Rothbraune R." and "Langrüsselige R." are better considered vernacular names than descriptions. Since the only included species were *nomina nuda* the genus should be treated as one for which no species was distinctly named in the original publication and the first one subsequently placed in the genus becomes *ipso facto* the type.

4. *Rhinostoma* is again mentioned in a review article ascribed to Friedrich Boie (1827 : 263, columns numbered rather than pages) with no further description or any specific citation, but with reference to two specimens in the Vienna Museum Collection. In another critique by Schlegel (*l.c.*, column 284) the gender of the specific names is corrected in the citations *Rhinostoma rufo-fuscum* and *Rhinostoma proboscideum*, once more with no further biological information.

5. Wagler (1830 : 171) described *Rhinostoma*, crediting its authorship to Fitzinger, and included as the only certain species *Vipera nasua* "Oppel" (a manuscript name taken from a label on a Paris Museum specimen) which Wagler described properly, thus fixing *nasuum* as the type-species by monotypy as well as representing the first described species to fit the generic diagnosis. *Rhinost. proboscideum* Fitzing. is included in parentheses with a query.

Rhinostoma nasuum Wagler has been applied only to species other than that characterized by Wagler in his original description.

6. Schlegel (1837 : 100) described *Heterodon rhinostoma*, a species later becoming the type of the valid monotypic genus *Simophis* Peters (1860 : 521, see paragraph 13 below).

7. In 1843 Fitzinger (page 26) designated *Rhinostoma rufo-fusca* Fitz. as type of a new sub-genus, *Rhinosiphon*, and *Rhinostoma proboscideum* Fitz. as the type of *Rhinaspis*, a new sub-genus of the genus *Erythrolamprus*, without supplying descriptions for any of these names. On page 28 he designated *Rhinostoma nasua* (Wagl.) the type of *Rhinostoma* Wagl. (Fitz.).

8. Troschel (1848 : 653) described *Heterodon guianensis*, from near Pirara, British Guiana.

9. Duméril, Bibron and Duméril (1854 : 772) described a new snake with turned up snout as *Heterodon Dorbignyi*, a species later made the type of *Lystrophis* Cope (see 11 below).

This is actually the species previously described by Wagler 1830 as *Rhinostoma nasua*.

10. At the same time Duméril, Bibron and Duméril (1854 : 991) described a new genus and species, *Rhinosimus guerini* from Bahia, Brazil, distinguishing the genus from *Rhinostoma* by virtue of single subcaudal scales in the former and a paired condition in the latter.

The subcaudal character now proves variable within the species *guerini*. In a forthcoming revision (Bailey ms.) *guianensis* Troschel and *guerini* D., B., and D. (*nec* Boulenger, Amaral *et al.*) are recognised as congeneric.

11. In the same work (page 994) these authors applied *Rhinostoma nasuum* Wagler, 1830, incorrectly to the species described by Troschel (1848) as *Heterodon guianensis*, the description of which was apparently overlooked. This error generally persisted until 1896 (see 8 above and 16 below). At the same time these authors erred further in synonymizing *Heterodon rhinostoma* Schlegel, 1837, with their *Rhinostoma nasuum*.

12. Cope (1860 : 79) noted that *Rhinosimus* D., B. & D., 1854, was pre-occupied by *Rhinosimus* Latreille, 1802, for a genus of beetles, and proposed *Phimophis* as a substitute name.

13. Peters (1860 : 521) proposed *Simophis* as a new generic name for *Heterodon rhinostoma* Schlegel, 1837.

14. Jan (1863 : 42-43), revived *Rhinaspis proboscideus* Fitz. (see 7 above) describing the genus in analytical fashion in a key to the genera of his family Coronellidae. Since only one species is involved the description serves to validate both the genus and species, thus making the specific name available as of 1863. *Heterodon rhinostoma* Schlegel, 1837, was placed in synonymy and the Vienna Museum was indicated as the repository of (a) specimen(s).

Presumably this was done on the basis of the considered priority of Fitzinger's name (a *nomen nudum*) over that of Schlegel. The validation of *Rhinaspis* follows by three years the establishment of *Simophis* as a valid genus, hence it may be considered a strict synonym. Similarly, as the specific name *proboscideus* was only validated in 1863 it is a synonym of *rhinostoma* Schlegel 1837.

15. Cope (1885 : 193) proposed the generic name *Lystrophis* for *Heterodon Dorbignyi* Duméril, Bibron and Duméril, 1854.

This genus and species have both had uncomplicated nomenclatorial histories since originally proposed. Wagler's earlier description of *Rhinostoma nasua* fits this species rather than the species to which it has been applied, and a strict application of priority would require replacement of *Lystrophis dorbignyi* (D., B. and D.) by *Rhinostoma nasuum* Wagler.

16. Boulenger (1896 : 114) pointed out in a footnote that "The *Vipera* (*Rhinostoma*) *nasua* of Wagler, Syst. Amph. p. 171, is, to judge by the definition given, probably identical with *Lystrophis dorbignyi* D. and B.". Accordingly he rejected *nasua* and restored Troschel's specific name *guianensis* but continued using *Rhinostoma* for the genus.

Confusion was added when Boulenger, 1896 (*loc. cit.*) continued an error of Jan 1863 and Jan and Sordelli 1870 in applying the specific name *guerini* to a species originally described by D., B. and D. as *Scytale neuwiedii* var. *nigrum*. The skull of *nigra* is distinctive and was clearly described. At the same time Boulenger (pp. 114–115) included a specimen of the true *guerini* (see 10 above) under *Rhinostoma guianensis*. In both of these errors he has been followed by most recent authors, notably Amaral 1929 *et al.*

17. *Rhinostoma* has been used also as the generic appellation of the North American *Cemophora coccinea* (Blumenbach) by Holbrook (1842 : 125) and by Baird and Girard (1853 : 118).

18. Dunn (1944 : 202) upon my advice revived *Phimophis* Cope 1860 as the correct generic name for *guianensis* Troschel, 1848.

19. Since the snakes of this group are relatively scarce and as yet have had little or no place in popular or experimental literature any name changes would be of present concern primarily to taxonomists dealing with the South American snake fauna. The least disturbance to our present nomenclature and the least confusion in our understanding of the past literature would seem to be effected by the actions recommended below. Likewise the spirit of the Règles is not violated by (unnecessary) arbitrary changes of clearly established type-species. Such arbitrary decisions should be enacted only to save a name with an extensive non-taxonomic history.

20. For the reasons set forth above the International Commission on Zoological Nomenclature is requested in the interests of stability, universality and sound nomenclatorial practice :

- (1) to use its plenary powers to suppress the following names for the purposes of the Law of Priority but not for those of the Law of Homonymy :

- (a) the generic name *Rhinostoma* Fitzinger, 1826 ;

- (b) the specific name *nasua* Wagler, 1830, as published in the binomen *Vipera nasua* ;

- (2) to place the following generic names on the Official List of Generic Names in Zoology :—

- (a) *Lystrophis* Cope, 1885 (gender : masculine), type-species, by original designation *Heterodon dorbignyi* Duméril, Bibron & Duméril, 1854 ;

- (b) *Phimophis* Cope, 1860 (gender : masculine), type-species, by monotypy, through *Rhinosimus* Duméril, Bibron & Duméril, 1854, *Rhinosimus guerini* Duméril, Bibron & Duméril, 1854 ;
- (c) *Simophis* Peters, 1860 (gender : masculine), type-species, by monotypy, *Heterodon rhinostoma* Schlegel, 1837 ;
- (3) to place the following specific names on the Official List of Specific Names in Zoology :
 - (a) *dorbignyi* Duméril, Bibron & Duméril, 1854, as published in the binomen *Heterodon dorbignyi* (type-species of *Lystrophis* Cope, 1885) ;
 - (b) *guianensis* Troschel, 1848, as published in the binomen *Heterodon guianensis* ;
 - (c) *guerini* Duméril, Bibron & Duméril, 1854, as published in the binomen *Rhinosimus guerini* (type-species of *Phimophis* Cope, 1860) ;
 - (d) *nigrum* Duméril, Bibron & Duméril, 1854, as published in the combination *Scytale newwiedii* var. *nigrum* ;
 - (e) *rhinostoma* Schlegel, 1837, as published in the binomen *Heterodon rhinostoma* (type-species of *Simophis* Peters, 1860) ;
- (4) to place the following generic names on the Official Index of Rejected and Invalid Generic Names in Zoology :
 - (a) *Rhinostoma* Fitzinger, 1826 (suppressed under the plenary powers in (1)(a) above) ;
 - (b) *Rhinosiphon* Fitzinger, 1843 (a *nomen nudum*) ;
 - (c) *Rhinaspis* Fitzinger, 1843 (a *nomen nudum*) ;
 - (d) *Rhinosimus* Duméril, Bibron & Duméril, 1854 (a junior homonym of *Rhinosimus* Latreille, [1802-3]) ;
- (5) to place the following specific names on the Official Index of Rejected and Invalid Specific Names in Zoology :
 - (a) *nasua* Wagler, 1830, as published in the binomen *Vipera nasua* (suppressed under the plenary powers in (1)(b) above) ;
 - (b) *proboscidea* Fitzinger, 1826, as published in the binomen *Rhinostoma proboscidea* (a *nomen nudum*) ;
 - (c) *proboscidea* Fitzinger, 1843, as published in the binomen *Rhinostoma* (*Rhinaspis*) *proboscidea* (a *nomen nudum*).

ALTERNATIVE PROPOSALS

21. Consideration has been given to possible alternatives to the suppression of either or both the generic name *Rhinostoma* and the specific name *nasuum*. Three possibilities offer themselves ; but none is recommended.

(a) To restore *Rhinostoma nasuum* Wagler, 1830, to its original sense thus relegating to synonymy the current *Lystrophis dorbignyi* (D., B. & D.). Since *Rhinostoma nasuum* has never been used since its original proposal for the species intended, and since it would replace *Lystrophis* (in continual use since its proposal in 1885) and *dorbignyi* (in continual and uncontested use since its proposal in 1854), there would appear no virtue other than priority in its re-establishment. In fact it would only add confusion by being used in a

context different from that in which it was formerly used.

(b) Return to the old use (1854–1896) of *Rhinostoma nasuum* as a valid senior synonym for *Phimophis guianensis* by designating a specimen of the current *guianensis* as neotype of *nasuum*. This alternative would have the virtue of utilizing a familiar generic name in its usual context, but would cause the replacement of the long established specific name, *guianensis*, by the previously rejected *nasuum*, and would require an arbitrary displacement of the original context of the specific name.

(c) Return to the use (1896–1944) of *Rhinostoma* as a valid senior synonym of *Phimophis* but not recognise *nasuum* as a valid senior synonym either of *dorbignyi* or *guianensis*. This would entail relegation of *nasuum* to the Official Index of Rejected and Invalid Specific Names in Zoology and an arbitrary ruling by the Commission changing the type-species of *Rhinostoma* from *nasuum* to *guianensis* (which would be preferable to one of the other species which are little known).

ANNEXE

Authority	A	B	C	D	E
Wagler, 1830	<i>Rhinostoma nasua</i>				
Schlegel, 1837					<i>Heterodon rhinostoma</i>
Troschel, 1848		<i>Heterodon guianensis</i>			
Duméril, Bibron & Duméril, 1854	<i>Heterodon dorbignyi</i>	<i>Rhinostoma nasuum</i>	<i>Rhinosimus guerini</i>	<i>Scytale newiedii</i> var. <i>nigrum</i>	= <i>nasuum</i> of col. B
Jan, 1863	<i>Heterodon dorbignyi</i>	<i>Rhinostoma nasuum</i>		<i>Scytale guerini</i>	<i>Rhinaspis proboscideus</i>
Jan & Sordelli, 1870		<i>Rhinostoma nasuum</i>		<i>Scytale guerini</i>	
Boulenger, 1894	<i>Lystrophis dorbignyi</i>				<i>Simophis rhinostoma</i>
Boulenger, 1896		<i>Rhinostoma guianensis</i>	<i>Rhinostoma guianensis</i>	<i>Oxyrhopus guerini</i>	
Most recent authors	<i>Lystrophis dorbignyi</i>	<i>Rhinostoma</i> or <i>Phimophis guianensis</i>	<i>Rhinostoma guianensis</i>	<i>Pseudoboa guerini</i>	<i>Simophis rhinostoma</i>
This proposal	<i>Lystrophis dorbignyi</i>	<i>Phimophis guianensis</i>	<i>Phimophis guerini</i>	<i>Pseudoboa nigra</i>	<i>Simophis rhinostoma</i>

TABLE 1

Summary of usage of specific names referred to herein by principal authors. Synonyms are in vertical columns.

LITERATURE CITED

- Amaral, Afranio do, 1930. Lista remissiva dos ophidios da regio neotropica. *Mem. Inst. Butantan* 1929, 4 : 127–272
- Bailey, Joseph R. Revision of the snake genus *Phimophis*. *inedit*
- Baird, S. F. and Charles Girard, 1853. *Catalogue of North American Reptiles in the museum of the Smithsonian Institution*. Part I.—Serpents. Pp. 1–172. Washington

- Boie, Friedrich, 1827. Neue Classification der Reptilien. *Isis* (von Oken) 20(3) : 261-267
- Boulenger, G. A., 1894. *Catalogue of the snakes of the British Museum*, 2 : 1-382
- , 1896. Same title, 3 : 1-727
- Cope, E. D., 1860. Catalogue of the Colubridae in the Museum of the Academy of Natural Sciences of Philadelphia. I. Calamarinae. *Proc. Acad. nat. Sci. Philad.* 12 : 74-79
- , 1885. Twelfth Contribution to the Herpetology of Tropical America. *Proc. Amer. Phil. Soc.* 22 : 167-194
- Duméril, A. M.-C., G. Bibron & A. Duméril, 1854. *Erpetologie Générale* 7 : 1-1536
- Dunn, E. R., 1944. *Los generos de Anfibios y Reptiles de Colombia*, III. Tercera Parte : Reptiles, Orden de las Serpientes. *Caldasia* 3 : 155-224
- Fitzinger, L. I., 1826. *Neue Classification der Reptilien nach ihren natürlichen Verwandtschaften*. Pp. 1-66. Vienna
- , 1843. *Systema reptilium*. 1 : 1-106. Vienna
- Holbrook, J. E., 1842. *North American Herpetology* 3 : 125. London
- Jan, G., 1863. *Elenco Sistematico degli Ofidi descritti e disegnati per l'Iconografia Generale*. Pp. 1-143. Milan
- and Ferdinand Sordelli, 1870. *Iconographie generale des ophidiens*. Livr. 34, pl. 6
- Peters, W., 1860. [No title.] *Monatsb. K. Akad. Wiss. Berlin*. Pp. 517-521
- Schlegel, H., 1827. Herpetologische Nachrichten. *Isis* (von Oken) 20(3) : 281-294.
- , 1837. *Essai sur la Physionomie des Serpents*. 2 : 1-606. Amsterdam
- Troschel, F. H., 1848. In Schomburgk, *Reisen in Britisch-Guiana*, Reptilien. Pp. 645-661. Leipsig
- Wagler, Johann, 1830. *Natürliches System der Amphibien, mit vorangehender Classification der Säugthiere und Vögel*. Pp. 1-352